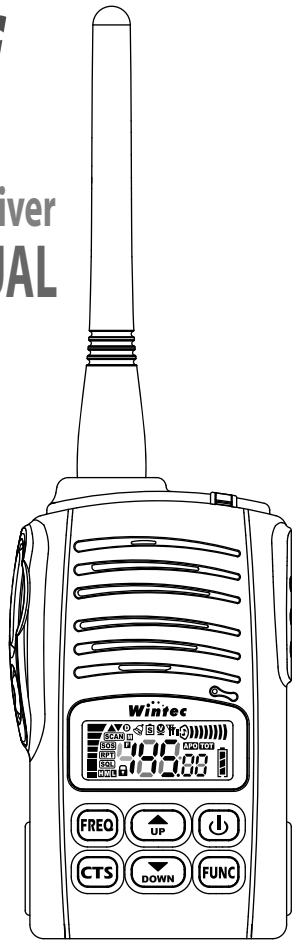
Wintec

45V/45U
FM Radio Transceiver
USER'S MANUAL



■ Thank you for purchasing 45V/45U two way radio manufactured by Wintecroncs. Based on the ever-changing innovative technology ,we have been developing many different wireless products which had gained consumers' affection widely. Besides our appreciation for your love of our products, we even wish you to find new product information. Your precious comment will be cherished by us.

Please read through the manual carefully for many features of this model.

■ Certificate Approval

ETC094AR

CE 0700

■ Applicable Model for this manual

45V-E VHF amateur transceiver
45V-A VHF amateur transceiver
45U-E UHF amateur transceiver
45U-A UHF amateur transceiver

■ Safety warning

Consumers need to have clear understanding of safety se of this product.
Turn off power before fueling or parking at the gas station.

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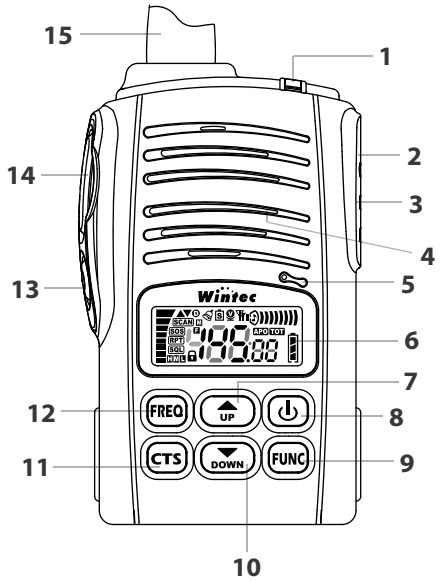
Distinctive features

- Use of TCXO resonator to enhance freq. stability
- Digitally designed to ensure stable quality
- Extra-small size with sturdy case, compliant with US military standards
- 7 group tone calls and includes amateur's MORSE code
- 8 levels of VOX (voice-activate feature) with quick VOX capability ON/OFF
- 3 steps auto-power save modes / 4 steps auto power-ON / 4 steps time-out- timer
- 1 hazard channel and 36 memory channel setting
- 38 standard CTCSS code
- Multi-Icon Backlit LCD screen with back light
- Roger Tone ON/OFF
- Signal indicator
- Repeater value setting 0.1~15MHz
- Frequency progressive value selection
- REV/ TX/RX frequency
- TX/RX modulation switch 5K/2.5KHz

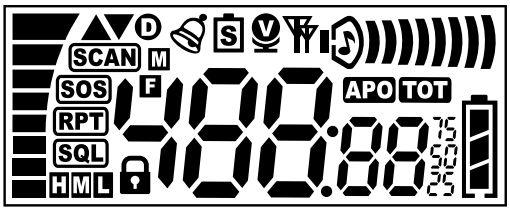
RADIO CONTROLS/FUNCTIONS

45V/45U



1. LED indicator
2. External Speaker jack
3. External Mic jack
4. Speaker
5. Mic
6. LCD screen
7. UP button
8. Power button
9. Function button
10. Down button
11. CTCSS (group code) button
12. Frequency adjustment button
13. Monitor /backlight button
14. (Push-to-Talk) PTT button
15. Antenna

ICONS GUIDE



	TONE CALL
S	AUTO-POWER SAVE
V	(Voice-activate system) VOX
	KEYPAD TONES
	VOLUME
APO	AUTO-POWER-OFF
TOT	TIME-OUT TIMER
	BATTERY POWER
88	CTCSS CODE
488	Frequency Channel Display
SQL	Squelch level
	KEYPAD lock
H M L	TX power level
SOS	Hazard (Emergency) channel
M	Memory Channel
SCAN	Scanning
	Signal strength indicator
	TX/RX different channel
D	CTCSS ON indicator
RPT	Repeater mode enabled

Operation Guide

1. Power ON/OFF

Hold [⏻] about 0.5 sec to power radio. While power ON, hold [⏻] about 1.5 sec to turn power OFF.

2. Transmitting/ Receiving

While holding [PTT], speak to the microphone area. LED glows red during transmission. To receive, release [PTT] . LED glows green when receiving.

※When speaking, keep about 5~10 cm from microphone area slowly and clearly.

3. Volume adjustment

Momentarily press repeatedly on [UP], to adjust volume louder. Momentarily press repeatedly on [DOWN] to adjust volume lower. Press and hold [UP] or [DOWN] to swiftly adjust volume. Do adjustment as you need.

※Caution: For external mic/speak user, adjust volume , starting from lowest level.

4. VFO frequency/ MEM channel/ SOS channel Selection.

1. Momentarily press [FREQ] + [UP] to swift to VFO frequency mode as above icon display.

(This function will be unworkable when MEM channel function is on)

2. Momentarily press [FREQ] + [DOWN] to swift to MEM channel as above icon display. (This function will be workable only after MEM channel is set beforehand)

3. Press and hold [FREQ] 3 sec to swift to SOS frequency as above icon display, and press and hold [FREQ] 3 sec again to return to VFO frequency.

5. VFO frequency operation

1. KHz adjustment:

Momentarily press [FREQ] and then frequency icon blinks, Momentarily press [UP] + [DOWN] to select the frequency and then press [PTT] to exit adjustment mode.

If the desired frequency is far from the frequency setting at present, MHz can provide a quick adjustment for the frequency.

2. MHz adjustment:

Momentarily press [FREQ] twice (Press once if in KHz mode) and then frequency icon blinks, Momentarily

press [UP] + [DOWN] to select the frequency. Press [PTT] to store and exit adjustment mode. (Press [FREQ] once again can return to KHz mode)

※Each selection is to add or decrease 1MHz of frequency.

※Each selection for KHz is to add or decrease 10KHz (factory default). To change Factory Default, please refer to F 12.

3. Scan Frequency

Momentarily press [FREQ] once. While frequency icon blinks, hold on [UP] or [DOWN] about 2 sec to start scanning of frequency. Jumping of Frequency numbers increasingly or decreasingly indicates scan in progress . Scan stops when it detects a frequency. Temporarily press [PTT] or [FREQ] or [FUNC] will disable auto scan and select the final frequency.

※Note: To Scan, turn off CTCSS codes.

6. Memory channel mode operation

1. Memory Channel Selection: (store the channels beforehand)

Press [FREQ] , while frequency icon blinks, hold [UP] or [DOWN] to select channels. Press [PTT] to store and exit the selection mode.

2. Scan memory channels:

Press [FREQ] once, while frequency icon blinks, hold [UP] or [DOWN] about 2 sec to start scanning of channel. Jumping of channel numbers increasingly or decreasingly indicates scan in progress. Scan stops when it detects a memory channel. Press [PTT] or [FREQ] or [FUNC] to store and exit the scan mode.

3. Memorize and delete memory channel/SOS channel

(1)
(2)

Operate under VFO frequency mode, and select your expected frequency. Hold [FREQ] ,and press [FUNC] once to enter managing mode. (Please hold [FREQ] button until the setting is completed). Press [UP] or [DOWN] key to select your desired memory or deletion Ch No. (There are total 37 CHs including SOS Channel). If there is blank beside the CH (as Illustration 1) that means CH is memorized with value. If it shows the Icon "- -", (as Illustration 2), that means the Channel is vacant. Press [FUNC] once again can store the CH and hold [FUNC] longer can delete the CH. (you can only memorize SOS channel) (Please release [FREQ] button after the setting is completed and it will go back to VFO frequency mode automatically.

※The above functions can be programed easily trough our cable and software for PC.

4. Examine Frequency for memory channels.

Operate under MEM channel mode. Hold [FREQ] , and press monitor button once, LCD icon will display

the number of present frequency. Release FREQ button about 2 sec., LCD display will return to MEM mode automatically.

7. CTCSS Code ON/OFF

(ON) (OFF)

1. Hold on CTS for about 2 sec, to enable CTCSS . Hold on CTS again for about 2 sec to disable.
2. While CTCSS is enabled, the icon will blink and press temporarily UP / DOWN repeatedly to select CTCSS.
3. Press CTS short once, CTCSS code can be change by UP / DOWN button.
4. Press CTS or FUNC or PTT to leave the CTCSS setting.

8. LCD back light ON/OFF

Temporarily press ○ to turn backlight ON.
Temporarily press ○ again to turn backlight OFF or it will automatically turn OFF after 5 sec lighting.

9. Monitoring

Hold on ○ for about 1 sec to open the speaker. In the meantime, If any user is using under the same frequency even with different CTCSS, the voice will still be heard. (LED glows green).

※ Monitor is used for following purposes.

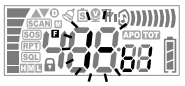
1. To receive weak signal for long to distance or for intermittentl signal.
2. To receive all signals on same channel even with different CTCSS for monitoring.

10.Keypad lock /unlock

1. Hold on FUNC for about 3 sec till 🔒 shows on the screen to confirm keypad is locked.
2. To unlock keypad ,hold on FUNC again for about 3 sec till 🔒 disappear from the screen.

※When keypad lock is enabled, volume control and program features are locked to prevent accidental function changes.

11.Function settings



Temporarily press FUNC to enable menu mode. Use UP / DOWN to scroll manu item between 1 and 9.

F 1. Tone call selection: Under menu item 1, tone call 1 ~ 7 can be selected. Factory default is at b1.

~

F 2.Power save mode selection. Under manu item 2 , power save modes 1:1 ~ 1:4 can be selected. Choose 1:4 if talk time is short for best power saving.Factory default is OFF.

(OFF) (1-4)

F 3.VOX on/off selection: Under manu item 3, VOX on/off can be selected. Factory default is OFF. VOX ON/OFF.

(OFF) (ON)

F 4.VOX's sensitivity: Under manu item 4, VOX's sensitivity can be selected L1~L8 levels. L8 is the least sensitive (Refer to 12).

(L3)

(L8)

※This function will be unworkable when **F** 3 turns OFF.

F 5.REV/ TX/RX frequency: When the mode is on, RX and TX frequency will be reverse. (Factory default is off)

(OFF)

(ON)

※It is disable while **F** 10 is off.

※Please refer to page16 for quick setting.

F 6.Keypad tones: Under manu item 6, select ON/ OFF. The factory default is OFF. The beep sounds weakest at OFF. (Factory default is on)

(OFF)

(ON)

F 7.Auto-power-off: Under manu item 7, choose OFF /03/10/30/60 min according to your need. (The factory default is OFF.) When 03 is selected, the radio automatically turns power off if there is no operation or signal received after 3 mins. It beeps twice per 10 secs and lasts for 30 secs before turning off. (Factory default is off)

(OFF)

(03min)

F 8.time-out Timer: Under manu item 8, choose OFF /30/60/120/180 according to your need. The factory default is OFF. When 30 is selected, the radio will send beep sounds twice and stop transmission. If continuous talk exceeds over 30 sec, radio will automatically swift to receiving mode.(Factory default is off) TOT icon blinks if still holding PTT at time-out.

(OFF)

(30sec)

F 9.Squelch setting: Factory default is L3. If the squelch is set at L0, the static sound is heard all the time. If setting at L1, radio is best to pick up weak signal but susceptible to interferences. Squelch L9 is the least sensitive and suited for use against high interferences.

(L3)

(L9)

F 10.Repeater ON/OFF(Factory default is off)

(1)

(2)

(3)

Press UP or DOWN key for selection, when screen displays "+" (as illustration 1) means repeater is on, and the frequency of transmission is higher than that of receiving by 1 span. This function turns off when screen displays "OFF" (as illustration 2) When screen displays "-" (as illustration 3) means repeater is on, and the

frequency of transmission is lower than that of receiving by 1 span.

F 11.Roger tone ON/OFF

The radio will send a sound to the receiver at each end of the talk. Factory default is off.

(OFF)

(ON)

F 12.Frequency span value setting: 5K/10K/ 12.5K/25K.

Factory default is 10K. The value can be changed.

F 13.Frequency span value setting for repeater (Factory default is 0.6MHz). When enable this function, the frequency span value between transmission and receiving can be from 100K (01) to 15MHz (150)

※Please refer to 15 repeater function for more details.

F 14.Wide/ Narrow band transmission and receiving setting: The radio can operate the transmission or receiving both±5KHz in wide band and ±2.5Khz in narrow band.

12.Tone call & 1575 Hz Tone Burst

For selecting the type of tone call, please refer to F 1. Holding PTT , temporarily press CTS can send tone call to other receivers.For sending 1575 Hz tone burst, please enter the tone call selection mode and select b7. Hold PTT and press CTS bottoms together to send 1575Hz tone burst for accessing the repeaters.

13.VOX (Voice quick activate transmission feature) ON/OFF

(ON)

(OFF)

Holding PTT, temporarily press FUNC to enable VOX. To disable it, holding PTT, temporarily press again FUNC . For programming of VOX's sensitivity, refer to F 4.

※While VOX is enabled , no need to hold PTT during transmission. Just talk into the microphone area of radio unit. with appropriate sound (depending on VOX's sensitivity)

14.TX Power adjustment

(H)

(M)

(L)

Holding PTT, temporarily press UP / DOWN to select for option of H/M/L.Select H for high TX power, M for medium and L for low .The factory default is Low.

15.Attention for reapter mode

Please attend to the following points while operating this function.

1. (F10) select "+" or "-"
2. (F13)select the discrepancy of span by 0.6MHz or select any of settings but it will be invalid if exceeding the frequency ranges of the radios.
3. Be sure to enable the CTCSS tone. Some repeater need to open up CTCSS tone.
4. Turn off REV TX/RX function (F5) if possible to decrease the interference for the transmission and receiving frequency.

※Frequency span for VHF is 600KHz (default 6)

※Frequency span for UHF is 4MHz (default 40)

16.Swift setting for REV TX/RX Reverse

Holding PTT, temporarily press FREQ to enable REV reverse function. Press again to turn off this function.

※This function can only work when the repeater (F 10) is on.

17.Function Setting Lock/Unlock

Enabling Function Setting Lock can keep the setting as original ones when power off. Press FREQ + UP and then turn on the power. Let go of all buttons after 3 beep sounds. The function is locked. When this function is enabled, all of the functions include CTCSS code, quick VOX, swift setting REV cannot be adjusted besides frequencies, CHs, and volume.To unlock, turn off the power and press FREQ + UP and then turn on the power.

Let go of all buttons after 1 beep sounds to restore the operation.

18.Keeping MEM channel

MEM channel can be stored in a long period of time.Keep the channel in advance and then turn off the power, Press FREQ + DOWN and turn on the power, let go of all buttons after 3 beep sounds. The memorization is enabled. To disable,repeat the same steps when power off. Let go of all buttons after 1 beep sounds.

※This function does not work while there is no M Ch.

■ Low battery warning

1. LCD display will show [ ] and beep once when battery is low. and it will beep once during every transmission. The power output will lower to M level automatically.
2. When battery is near to exhausted, LCD display will show [ ] and glow. It will beep twice during every transmission. The power output will lower to L level automatically.
3. By the time battery is exhausted, radio will turn off it selves.

■ Return to factory setting

Turn off the radio. Hold on [FUNC] , then press [⏻] until 3 beep sounds. Let go off all buttons to return to factory setting.

※After this function is activated, VFO and SOS will return to factory setting besides M ch.

※M ch will not be changed.

■ Programming by cable and software

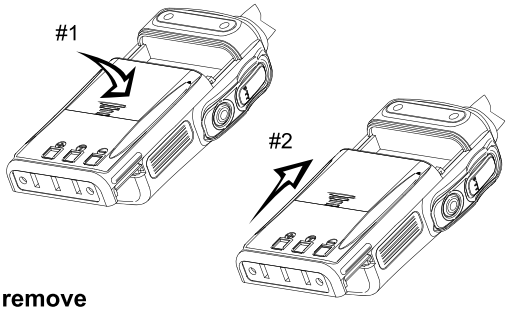
The radio can be edited some of functions, MEM and SOS frequencies by Wintec PC cable and software for more convenient setting.

■ INSTALLING/REMOVING BATTEY PACK

To install

❶ Place battery pack into battery compartment as in illus # 1.

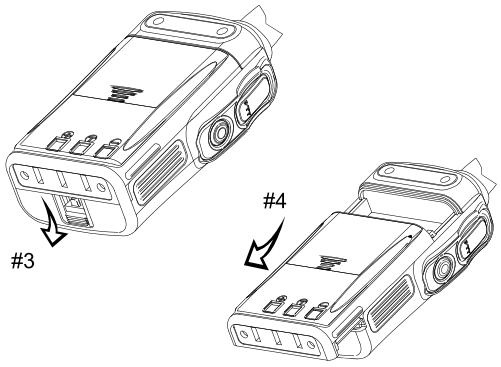
❷ Push battery pack forward as in illus # 2. It will lock into compartment.



To remove

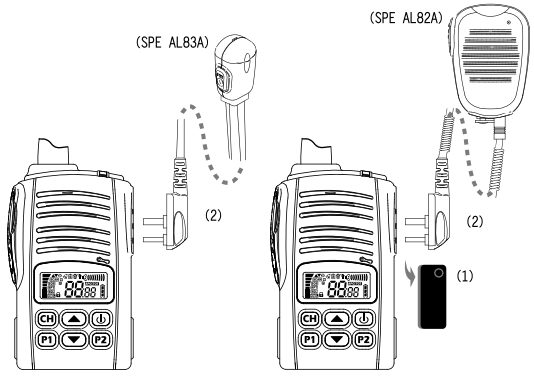
❶ Holding radio in one hand, push down battery latch as in illus # 3

❷ Slide battery pack backwards as in illus # 4.



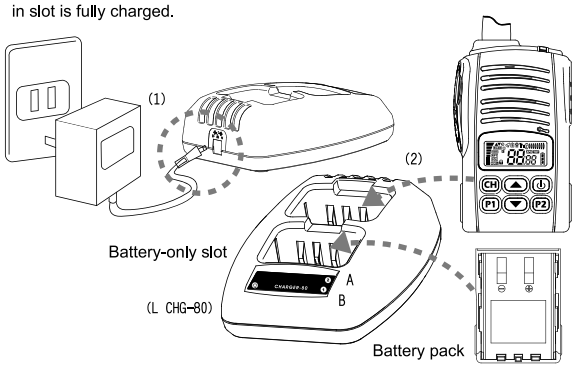
USE OF EXTERNAL MIC/SPEAKER

❶ Remove accessory jack cover
❷ Insert accessory jack
❸ Fix accessory with the screws



Battery charging

Power drop-in charger with standard AC/DC wall charger . Drop in radio installed with battery into the battery-with-radio slot. Spare battery pack into the battery-only slot. Single or dual charging is possible. Each LED light individually indicates charging slot in process. LED turns off when battery in slot is fully charged.



CTCSS vs. frequency

01=67.0Hz	11=97.4Hz	21=136.5Hz	31=192.8Hz
02=71.9Hz	12=100.0Hz	22=141.3Hz	32=203.5Hz
03=74.4Hz	13=103.5Hz	23=146.2Hz	33=210.7Hz
04=77.0Hz	14=107.2Hz	24=151.4Hz	34=218.1Hz
05=79.7Hz	15=110.9Hz	25=156.7Hz	35=225.7Hz
06=82.5Hz	16=114.8Hz	26=162.2Hz	36=233.6Hz
07=85.4Hz	17=118.8Hz	27=167.9Hz	37=241.8Hz
08=88.5Hz	18=123.0Hz	28=173.8Hz	38=250.3Hz
09=91.5Hz	19=127.3Hz	29=179.9Hz	
10=94.8Hz	20=131.8Hz	30=186.2Hz	

Specification

Frequency Range for 45V-E ---------- 144~146

Frequency Range for 45V-A ---------- 144~148

Frequency Range for 45U-E ---------- 430~440

Frequency Range for 45U-A ---------- 438~450

Number of Channels (include SOS) ---------- 37

CTCSS ---------- 1~38

Electric Wave Type ---------- FM

Speaker Impedance ---------- 8ohm 0.5W

Power Supply Voltage ---------- 7.2V

Dimensions ---------- 55(W)x95(H)x31(D)mm

Weight ---------- 250g(include battery)

Operating Temperature Range ------- -20°C~+70°C

Receiver

Sensitivity ---------- 0.20uV

Electric Current ---------- less than 40mA

Transmitter

Output Power(45V) ---------- max. 5W @7.2VDC

Output Power(45U) ---------- max. 4W @7.2VDC

Electric Current (45V) ---------- 1.6±0.2A@5W

Electric Current (45U) ---------- 1.6±0.2A@4W

Optional Accessories

- ANT AL80 M/L antenna
- LP-84M Belt clip
- PB AL01 Leather case
- WI AL01 Interface cable for programming
- LP-83A Clip microphone earphone with LED indicator
- LP-83B Clip microphone earphone with LED indicator
- LP-82A Speaker microphone with LED indicator
- BT FR80 700mA Ni-MH battery pack
- BT FR80Li 1500mA Li-polymer battery pack
- BT FR80C Car adapters fake battery
- LCHG-81A Twin rapid charger for BT FR80
- LCHG-81B Rapid charger for BT FR80 & BT FR80Li
- LCHG-81C Regular charger for BT FR80

Safety information

1. Self-replacing or re-structuring of any parts by is legally not permitted or will lose license
2. Use is prohibited at restricted environment declared by authority,during flight, highly-explosive area like near mining areas
3. Avoid storing in high temperature or humid place for long time
4. Turn to lowest volume if external Mic/ Speaker is used,then adjust appropriately
5. If strange smell or smoke comes off from radio,dispatch to service center immediately
6. Never use other power sources for charging other than the standard charger set designed for this radio model
7. Take off battery pack if out of use for long time